SVN3M | Day 7 SCIENTIFIC METHOD AND PARADIGM SHIFTS Mr. Zuberi

**TASK A**: Read pages 32-35 and *then* describe each of the following.

1. Science
2. Scientific data
3. Experiment
4. Scientific hypotheses
5. Model
6. Scepticism
7. Reproducibility
8. Peer review
9. Scientific theory
10. Scientific or natural law
11. Scientific method
12. An exemplary dialogue involving the scientific method
13. Inductive reasoning
14. Deductive reasoning
15. An example of deductive reasoning
16. Sound science
17. Junk science
18. Objectivity
19. Causality

**TASK B**: Read the article on Thomas Kuhn and "Paradigm Shifts":   
<http://www.guardian.co.uk/science/2012/aug/19/thomas-kuhn-structure-scientific-revolutions>  
Answer the following questions based on the article.

Q1.What was the name of Kuhn’s book? What was the term he introduced and how influential has it been?  
A:

Q2: In what ways were our views before Kuhn dominated by philosophical ideas?  
A:

Q3: How did Kuhn see the world in contrast to the approach of previous thinkers?  
A:

Q4: What teaching environment lead Kuhn to his defining work?  
A:

Q5: Aristotle, a Greek philosopher who lived around 300 B.C., dominated scientific thought for over 2000 years in the areas of physics, chemistry and biology. What did Kuhn think of Aristotle when he learned about his work?  
A:

Q6: What was the insight that Kuhn had about different intellectual frameworks and what was an example of it?  
A:

Q7: What is an alternative term to “paradigm”?   
A:

Q8: What is “normal science” and what type of results does it produce?  
A:

Q9: What eventually happens to a paradigm over long periods of time?  
A:

Q10: What does the description regarding the possibility of scientific revolutions based on irrational grounds mean? Can you think of two paradigms, or ways of looking at the world, that cannot be compared with each other?  
A: